

ENGINEERING STANDARDS UPDATE

Standards are serious business, but this newsletter isn't.

Topics this month:

- **LBO Certificate of Occupancy Process Gets Some Press**
- **ESM and Standards Drawing Suggestions/Help Database -- NEW!**
- **Training & Qualification**
- **LANL Standards Issued in May**
- **Engineering Processes News**
- **DOE Technical Standards Action**
- **National Standards Action**
- **When Good Conduct of Engineering Isn't Followed**

The LANL Engineering Standards: <http://engstandards.lanl.gov/>

Note: This newsletter has hyperlinks all over but the blue/underlined formatting may not show. Hover your cursor where you might expect one; if you find a URL, Ctrl+Click to follow.

LBO CERTIFICATE OF OCCUPANCY PROCESS GETS SOME PRESS

In May, there was LANLTODAY article on the completion of the Exascale Class Computer Cooling Equipment project. It did a nice job describing aspects of the LANL Building Official Certificate of Occupancy process required by Engineering Standards Manual Chapter 16 IBC Program for our highest risk projects thanks to featuring Project Manager Gabriela Maria Lopez Escobedo.

https://int.lanl.gov/news/news_stories/2020/may/0505-eccce.shtml?source=lanltoday (internal only)

ESM AND STANDARDS DRAWING SUGGESTIONS/HELP DATABASE -- NEW!

Standards users now have a new and preferred way to submit comments or ask questions on the ESM or Standard Details and Example Drawings. Links have been added to those webpages that enable users to easily add records to a SharePoint library of inputs. The system then sends the right Standards POC an email so they can triage the new records and follow-up either near-term or upon next revision.

This new capability complements a similar database for LANL Master Spec suggestions that's accessible from atop the spec webpage (and a similar one on the AP webpage). Thanks to Cassandra Cde Baca and Christina Salazar-Barnes! Note: If the system asks for you to log in, try Internet Explorer instead of Firefox (to embrace the evil Microsoft Empire). Full library (has only test messages right now): <https://coe.lanl.gov/APs/Lists/CommentsList/AllItems.aspx>



“Maybe you should work from someone else’s home.”

TRAINING & QUALIFICATION

Two upcoming courses and some general information below that:

Guiding Principles for Federal Sustainable Buildings (High Performance Sustainable Buildings) Course, June 8-9

This course is a slightly updated version of the one live-taught in the MSL in March 2019, so is most appropriate for LANL Project Managers, Project Engineers, Engineers, Infrastructure Program Managers, Environmental Managers, Procurement Managers, and other DOE/NNSA interested parties that did not take it then, or desire a refresher.

Utrain course 45093 online sessions June 8th and June 9th, from 9am to 11am, both days. UTrain registrants will be sent the link to the Webex prior to the June 8. Questions: Sonia Ballesteros Rodriguez, UI Ops Support & Improvement Technical Project Manager and Sustainability SME, soniab@lanl.gov

NNSA and LANL (Laboratory) will present a webinar on The Council on Environmental Quality’s 2016 Guiding Principles for Federal Sustainable Buildings. Per ESM Chapter 14, the Laboratory is required to follow DOE’s 2016 Guiding Principles for Federal Sustainable Buildings for new construction and modernization of existing buildings. Attend the training if you are involved in:

- New facility construction
- Major modernization projects in existing buildings

The U.S. Federal Government has outlined its intent to advance sustainable building principles and practices throughout its portfolio, promulgated through a number of statutory and executive policies.

These sustainable principles and practices have been incorporated into the Guiding Principles for Sustainable Federal Buildings. For E.O. 13834 implementation, a sustainable Federal building has the same meaning as a high-performance green building (42 U.S.C. § 17061(13)).

The webinar is an opportunity to learn in detail, ask questions, and share ideas about achieving the 2016 Federal Guiding Principles.

The training session includes these learning objectives:

- The broad Guiding Principle (GP) policy and reporting framework;
- The elements and sub-elements of each GP metric;
- The GP's relationship to third-party certifications and standards such as LEED and ASHRAE Standard 189.1;
- Documentation examples and strategies to achieve the GPs and;
- Best practices and lessons learned

For UTrain Courses: Registering: Go to [UTrain](#), search on course, select and enroll. Disenroll if you have to bail. AEs can also register; use token (CryptoCard) or contact ES T&Q coordinator Yolanda Trujillo at 665-5696 or yjtrujillo@lanl.gov with Z number.

IECC 2009–2018 Significant Changes Course June 16/17/23 (\$, Non-LANL-sponsored)

The State of New Mexico is working to adopt the 2018 International Energy Conservation Code this year, and NM AIA is offering a \$60 GoToMeeting series in June on the significant changes from the 2009. LANL adopted the 2015 some time ago since we adopted/subscribe to many 2015 I-codes, although we try to use ASHRAE 90.1 instead. But if/when NM adopts the 2018, LANL will also do so through a revision to the ESM. Mechanical Chapter POC Michael Ladach thinks that at least the first three sessions will have some value because ASHRAE 90.1 and the IECC are similar in many ways, so it isn't a stretch to link what can be learned in this course to the applicable 90.1 sections.

- IECC 2009–2018 Significant Changes (\$60 Non-Members) Four 1.5 hr Webinar Sessions (6 HSW)
- JUNE 16 Introduction, Scope and Administration, Definitions + General Requirements
- JUNE 17 Commercial Provisions - Building Envelope (including Total Building Performance and Existing Buildings), Mechanical, and Service Water Heating
- JUNE 23 Commercial Provisions - Lighting, Additional Efficiency Package Options, Maintenance and Commissioning
- JUNE 24 Residential Provisions (Registration can be made for this session only for 1.5 HSW)

TIME: 1:00pm – 2:30pm each Tuesday + Wednesday using GoToMeeting

[CLICK HERE TO REGISTER](#) [Note: LANL cybersecurity doesn't allow this link, presumably since it's to constantcontact which some firms use to forever SPAM people, so you'd need to forward to your home email addy and register that route]. GoToMeeting courses themselves should work from LANL systems.

General Training News!

From Ruby Molinar, ES-Div Training Specialist:

We are hoping to have a dry run of Safety Basis for Engineers on June 15th. This will be a pilot course only. We hope to open up other training through Webex very soon. I encourage everyone (instructors and participants) to go to the telecommuting hub and watch the videos on Webex if you haven't done so yet.

Make sure you log on to UTrain and look at your "to do" list, complete all the training you can on-line. Please don't allow your training to lapse. If you have an upcoming incomplete requirement register for it through UTrain or call WRTC at 7-0059. Let either Yolanda Trujillo or me know if no courses will be offered before your expiration.

Training Extension Update:

- We are attempting to maintain personnel qualification even with the 90-day extension in place.
- If a live class is required from the White Rock Training Center the worker should register for that class. The worker will be notified of a WebEx alternative.
- The training team is running reports for the next 90-days to determine training requirement need and providing the data to HR-ITS (White Rock) so they have a sense of volume and timing of expiration.
- CPR is still being offered live—four workers at a time plus instructor.
- Proctoring is being conducted at the Central Park Square location.
- OJT is continuing as necessary. Instructor/Evaluator to student ratio is to be 1:1 or 1:2 depending upon conditions rather than the customary 1:4 ratio.
- Continuing training is to be performed via WebEx.
- If a worker is not able to maintain a training requirement we will manage the extension through WQAS and have the RLM send an email to their training support personnel outlining the authorization. The email will be the official record because we are unable to pull historical data from WQAS. I know of one example so far.

LANL STANDARDS ISSUED IN MAY
Engineering Standards Manual ESM STD-342-100

Chapter	Section	Title	Date	Summary of latest Revision
Ch. 17 - Pressure Safety	ADMIN-1	LANL Review Processes	5/1/2020	VAR-10281 Rev. 3 – Certification of Pressure Systems. Added Engineering Calculation in place of tubing lengths; defined systems less than 1000 lbf-ft as Category D fluid service; Added color to Attachment A R&D Pressure System Certification for flammable gas. Thanks to POC Ari Swartz.

ENGINEERING PROCESSES NEWS

AP News

The following Administrative Procedures have been revised and posted to the COE Administrative Procedures [SharePoint site](#). Always ensure you are working to the latest version of all Engineering Administrative Procedures adopted at your location.

AP-341-401 Rev. 5	COE Program Administrative Procedure Management	Issued 5/26, effective 6/24. An AP mostly for use by the CoE Office. Changed AP review period to 5 years.
AP-341-502 Rev. 6	Management Level Determination	Issued 04/24/20, eff. 5/24/20. Updated to incorporate Rev. 11 SD330 changes, mainly changes to ML-3 criteria. This change will require re-evaluation of many ML-3 and ML-4 systems; facilities have until 4/24/2021 to re-document determinations for same.

If you have been identified as requiring additional training on an AP you will see an assignment on your UTrain “to do” list.

The following APs are going through the revision process, make sure to get comments and change requests submitted through the COE AP website if you have them:

- AP-341-802 *System Health Reporting*
- AP-341-405 *Identification and Control of Technical Baseline in Operating Facilities*
- AP-341-403 *Master Document List*
- AP-341-602 *Requirements and Criteria Document*

The CoE Eng Processes Manager is Sarah Terrill, 667-7788, sterrill@lanl.gov. Please enter issues with APs in the SharePoint issues database. Use the live button below, same one that’s found in the upper right of the Processes SharePoint [homepage](#).



A webpage of the AP pdfs can be reached from LANL Internal with any browser/machine combo (also, you can easily get to int.lanl.gov from mymail.lanl.gov). Once in, you can navigate from the top of the [CoE home page](#) or directly [here](#). On the other hand, if you need the AP Word forms, open a terminal session and use IE for SharePoint for best results. When all else fails, email Christina Salazar-Barnes.

DOE TECHNICAL STANDARDS ACTION

Tech Stds Program [postings](#) in the past month: none

NATIONAL STANDARDS ACTION

LANL's [IHS](#) online codes & standards subscription news:

Document number: **ASTM E1557**

Publication Date: **6/1/2009**

Reaffirmed/Reapproved Date: **(R 2020)**

Title: **Standard Classification for Building Elements and Related Sitework—UNIFORMAT II**

Status: **Active**

Type of Change: **Reaffirmed and Editorial**

Teachable moment for these next two:

While LANL gets most national standards through the Research Library's IHS Engineering Workbench subscription, we get IEEE standards, reports, and such via our IEEE Xplore subscription. But if you want an Interpretation to IEEE C2 (NESC), that's via the IEEE SA tab of IEEE and anyone can get to those directly here: <https://standards.ieee.org/products-services/nesc/process/interpretations.html>

Document number: **IEEE C37.20.2A**

Publication Date: **3/5/2020**

Title: **Metal-Clad Switchgear Amendment 1: Control and Secondary Circuits and Devices, and All Wiring**

Type of Change: **Amendment**

Document number: **IEEE NESCIR590**

Publication Date: **4/14/2020**

Title: **National Electrical Safety Code**

Status: **Active**

Type of Change: **Interpretation**

Related:



[Your input needed for upcoming IEEE video](#)

(by Fri 6/5)

Do you use IEEE resources on a regular basis? Are you curious about how IEEE Xplore works? The Institute of Electrical and Electronics Engineers (IEEE) is creating a video for LANL employees and is looking for your questions.

[Read more](#)

WHEN GOOD CONDUCT OF ENGINEERING ISN'T FOLLOWED

Haven't seen one this wiggly since the Tacoma Narrows bridge collapse.

https://upload.wikimedia.org/wikipedia/commons/f/f2/Tacoma_Narrows_Bridge_destruction.ogv

Watch a Chinese Suspension Bridge Full of Traffic Bend Under Strong Winds (The Drive)

Experts say this is "completely normal." [Read the full story](#)

<https://www.thedrive.com/news/33321/watch-a-chinese-suspension-bridge-full-of-traffic-bend-under-strong-winds>

LAST MONTH'S UPDATE TOPICS

Miss an issue? The archive is at "Monthly Update" on the Standards homepage. Last month's topics:

- **Online Engineering Research Tools and Webinars**
- **Engineering Processes News**
- **LANL Standards Issued in April or so**
- **Training & Qualification (incl. High Performing and Efficient HVAC in Laboratories)**
- **Building Safety Month**
- **IAPMO Creates Database of Plumbing and Mechanical Related COVID-19 Resources**
- **DOE Technical Standards Action**
- **National Standards Action**
- **When Good Conduct of Engineering Isn't Followed**

The views expressed in this email are not necessarily those of my employer.

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